OTTER GOLD NL

CENTRAL DESERT JOINT VENTURE

3RD ANNUAL REPORT FOR
EXPLORATION LICENCES
EL7799, EL7803, EL7837 & EL8479

COOMARIE AGREEMENT

13 October 1999 to 12 October 2000

Compiled by N. Morrow

DISTRIBUTION:

NT Dept Mines & Energy
Anglo Gold Australasia Ltd., Darwin
Central Land Council
Otter Gold NL, Tanami
Summary

Exploration Licences (EL) 7799, 7803, 7837 and 8479 were granted to the Central Desert Joint Venture partners (Otter Gold NL 60% and Acacia Resources Ltd 40%) on October 13th 1997. The four exploration licences are subject to a Deed (Coomarie agreement) between the CDJV and the Traditional Owners executed 01/08/97.

The Coomarie tenement group comprises a large area of the Granites-Tanami Province where there has been minimal previous exploration. The tenements are viewed as a single project and exploration efforts have primarily focussed upon generating targets. Over the third licence year, the work programmes have primarily constituted data compilation, regolith interpretation and posthole drilling.

Exploration expenditure on all 4 licences subject to the Coomarie Deed for the period 13th October 1999 to 12th October 2000 was over $120 000.

Exploration in the fourth year will continue with emphasis on defining targets with postholes for angle RAB or aircore drilling and may include walkabout exploration posthole drilling to determine geology and depth of cover.

All of the area covered by the subject ELs remains under CDJV title and therefore details covered in this report should remain on CLOSED FILE.
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1.0 INTRODUCTION

As required by the Department of Mines and Energy (DME), this report contains details of exploration activities conducted within EL7799, EL7803, EL 7837 and EL8479 for the period 13th October 1999 to 12th October 2000. The four exploration licences are covered by a Deed between Otter Gold NL and the Traditional Owners, dated 1st August 1997. The tenements are viewed as a single project and were granted this status by the DME on the 13th October 1997. The Coomarie Agreement comprises tenements within the Central Desert Joint Venture (CDJV) between Otter Gold NL (60% and managers) and Anglo Gold (40%).

1.1 Location and Access

The CDJV tenements are located approximately 650km northwest of Alice Springs, and 300km southeast of Halls Creek. The Coomarie Agreement comprises four Exploration Licences covering a large area (705 km²) of the Granites-Tanami Province due west, south and north of the Tanami mine site (Figure 1).

Access to the tenements is by the Tanami Track, the Lajamanu Road, and through Suplejack Station via farm tracks. Within the CDJV, access is via exploration tracks and gridded baselines. Access to most areas was limited during the December to May extended wet season.

1.2 Tenement Status

Permission to explore within the Comarie tenements EL 7799, EL 7803, EL 7837 and EL 8479 was granted to Otter Gold NL on the 13th October 1997 for a period of six years. This report represents the third year of exploration.

1.3 Exploration History

Previous exploration of this region has been minimal. Initial investigation of the Tanami area was conducted by Davidson (1905). Davidson discovered gold-bearing quartz reefs. The reefs were mined between 1902 and 1908. Mining was restricted to the wet season due to lack of permanent water.

A gold rush was precipitated by the discovery of slab of stone containing an estimated 180oz of gold in 1909. The rush continued until 1913 and up to 200 men were working the field. Intermittent exploration and mining was conducted between 1913 and 1938, including the construction of an amalgamation plant in 1927. No official exploration was conducted in the Tanami Desert between 1938 and 1965.

In 1985, Harlock Pty. Ltd. commenced exploration within the Tanami mining leases which led to the commencement of open pit mining in mid-1987. Zapopan NL. acquired the ground and continued mining until March 1994. Otter Gold Mines Pty. Ltd. was granted access to explore around the mine site in 1989. Low-level Au anomalism was discovered in late 1989 which lead to the identification of the Redback Rise area as highly prospective. The Otter screening process also identified the Dogbolter and Jim's Find prospects.
In September 1990, the Shell Company of Australia Ltd. (Shell) entered into a joint venture with Otter. Management of the project was entrusted to Shell. In August 1993, Shell completed its earning phase (50%) by spending $5 million on exploration. In October 1994, a new joint venture was formed between Otter Gold NL and Acacia Resources Ltd. as a result of Shell divesting its mineral assets. The new joint venture is known as the Central Desert Joint Venture (CDJV), with participating interests 60% Otter and 40% Acacia. Otter Gold NL has management of the project.

1.4 Central Land Council

In accordance with the Mining Act and the Aboriginal Land Rights (N.T.) Act 1976 (ALRA), Otter Gold NL negotiated an agreement with the relevant traditional owners via the CLC. This agreement is a “conjunctive” agreement, a copy of which is held by the DME.

2.0 GEOLOGY

The Granites-Tanami Block is bounded to the west by the Canning Basin and to the east by the Wiso Basin. The stratigraphy of the Tanami Region has been revised as a result of an intensive study completed by the NTGS in 1999-2000 (Hendrickx et al., 2000). The stratigraphy outlined by Blake et al. (1975; 1979) has had some significant modifications.

Table 1. Comparison of stratigraphic nomenclature.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>Coomarie Sandstone</td>
<td>Supplejack Downs Sandstone</td>
</tr>
<tr>
<td>Birrindudu Group</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Talbot Well Formation</td>
<td>Gardiner Sandstone</td>
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<tr>
<td></td>
<td>Supplejack Downs Sandstone</td>
<td>Nanny Goat Creek Volcanics</td>
</tr>
<tr>
<td></td>
<td>Mount Winnecke</td>
<td>Mount Winnecke Group</td>
</tr>
<tr>
<td></td>
<td>Pargee Sandstone</td>
<td>Mount Charles Formation</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tanami Complex</td>
<td>Mt. Charles Beds</td>
<td>Tanami Group</td>
</tr>
<tr>
<td></td>
<td>Killi Killi Beds</td>
<td>Killi Killi Formation</td>
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<tr>
<td></td>
<td>Nanny Goat Creek Beds</td>
<td>Twigg Formation</td>
</tr>
<tr>
<td></td>
<td>Nongra Beds</td>
<td>Dead Bullock Formation</td>
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<tr>
<td></td>
<td>Helena Creek Beds</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MacFarlane Peak Group</td>
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<td></td>
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<tr>
<td></td>
<td>Nongra Beds</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Helena Creek Beds</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Archaean</td>
<td>Browns Range Metamorphics</td>
<td>“Billabong Complex”</td>
</tr>
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</tbody>
</table>
The oldest rocks are Archaean and consist of the Billabong Complex and the Browns Range Metamorphics. The Browns Range Metamorphics are exposed on the southern margin of the Browns Range Dome. They comprise granitic gneiss and muscovite schist intruded by fine-grained granite, thin granitic sills, aplite and pegmatite. The banded granitic gneiss of the Billabong Complex has been intercepted in drill core at The Granites mine and has been noted to outcrop in Mount Solitaire.

The Palaeoproterozoic MacFarlane Peak Group unconformably overlies the Archaean basement. It comprises a thick, structurally complex sequence of mafic volcanic, volcaniclastic and clastic sedimentary units, which possess a distinctive magnetic and gravity signature. The sequence occurs around the margin of the Frankenlia Dome, along the southern margin of the Coomarie Dome and at MacFarlanes Peak Range. It is considered to have a tectonic contact with the overlying Tanami Group.

The Tanami Group is a basin-fill sequence subdivided into three formations based on the main lithological associations. The Dead Bullock Formation occurs at the base of the Tanami Group and is dominated by siltstone, mudstone, chert and banded iron lithologies. The rocks outcrop at Dead Bullock Soak, Lightning Ridge and Officer Hill. At The Granites, the rocks have been metamorphosed to amphibolite facies to form schists. Gold mineralisation at The Granites and Dead Bullock Soak is hosted in the Dead Bullock Formation.

Killi-Killi Formation conformably overlies the Dead Bullock Formation and is the most extensive formation in the group. The sequence of turbidites varies from micaceous to quartz-rich lithologies, interbedded with siltstone, mudstone and occasional thin chert beds. Detrital mica indicates a granitic provenance. The Killi-Killi Formation is metamorphosed to lower greenschist facies, however, east of the Granites Goldfield, the rocks have a strong schistose fabric representing amphibolite facies metamorphism.

The Twigg Formation has been included in the Tanami Group based on structural similarities with the Killi-Killi and Dead Bullock Formations. Twigg Formation is confined to a narrow package of rocks immediately west of the Tanami Mine corridor. The formation comprises a sequence of interbedded purple siltstone with thin-bedded chert and minor medium bedded greywacke. Chert beds are thin bedded or banded, white or red and occasionally contain nodules similar to those in the Dead Bullock Formation. The relationship between the other Tanami Group rocks is uncertain as the boundaries are fault controlled but a lateral or distal equivalent is inferred.

Unconformably overlying and younger than the Tanami Group, the Pargee Sandstone and Mt Charles Formation are considered to be of similar age but deposited in different tectonic environments.

Pargee Sandstone is exposed west of the Coomarie Dome extending into Western Australia. It is characteristic of deposition is interpreted to have been deposited in a shallow marine environment, initially under high-energy conditions. The Pargee Sandstone comprises thick-bedded quartz and lithic sandstones and conglomerates, with pebbly sandstone and conglomerate at the base. Clasts are generally subangular to subrounded and comprise vein quartz, greywacke and siltstone derived from Killi-Killi Formation.
Mount Charles Formation (Tanami Mine Sequence) comprises an intercalated package of subaqueous basalt and turbiditic sedimentary units, interpreted to be deposited in a narrow continental rift setting between 1840 and 1810 Ma. The Mount Charles Formation is host to structurally controlled, vein-hosted gold mineralisation in the Tanami Mine Corridor. The package is well exposed in the open pits along the mine corridor, but outcrop is confined to small, isolated, silicified exposures on the western side of the Frankenia Dome. Sedimentary units include sandstone, mudstone, carbonaceous mudstones and intraclast conglomerate. The basalts are predominantly massive units with pillow basalts and basaltic breccias also evident.

In the northeast, the Nanny Goat Volcanics and Mount Winnecke Group unconformably overlie the Tanami Group. The Mt Winnecke Group comprises siliciclastic sediments and volcanic feldspar-quartz porphyry. The clastic sediments comprise coarse grained, poorly sorted quartz sandstone and gritstone sourced from felsic volcanic material.

The Nanny Goat Volcanics are characterised by predominantly subaerial, felsic volcanic rocks including quartz-feldspar ignimbrite, feldspar ignimbrite, rhyolite lava, basalt and minor siliciclastic sediments. These rocks outcrop in the vicinity of Nanny Goat Creek, east of Suplejack Downs and Birrindudu and may be intimately associated with the Mt Winnecke Group. Contemporaneous intrusive activity occurred with the Nanny Goat and Mt Winnecke volcanism, including the emplacement of the Coomarie, Frankenia, Winneckie and Browns Range Suite granites.

The Birrindudu Group comprises three units with Gardiner Sandstone at the base, overlain by Talbot Well Formation and Coomarie Sandstone. The Suplejack Down sandstone is interpreted to belong to this group but its relationship is unclear. The Birrindudu Group lie unconformably over the Browns Range Metamorphics, MacFarlane Peak Group, Tanami Group, Pargee Sandstone, Nanny Goat Creek Volcanics and Mount Winnecke Group.

The Cambrian Antrim Plateau Volcanics consist of intensely weathered basalt capped by pisolitic laterite. The basalts are mainly sub-aerial, extrusive basalts, although the occurrence of pillow structures south of Browns Range Dome suggests that some basaltic extrusion occurred in sub-marine conditions. Cenozoic laterite, silcrete, calcrete, and Quaternary debris cover 60–70% of the Tanami Desert. The Quaternary sediments are generally unconsolidated, representing the most recent phase of erosion and deposition of sands, gravels and lithic fragments.

### 3.0 EXPLORATION

#### 3.1 EL7799 (Ware Range)

No exploration has been carried out between October 1999 and October 2000 on EL7799, aside from interpretive work using the CRC LEME regolith data.

Several low order geochemical anomalies were identified from broad-spaced helicopter soil sampling programmes in June-July 1999. The regional soil programme sampled transported alluvial sediments of ambiguous depth. An exploratory posthole programme is warranted to determine the depth of cover, stratigraphy, and reliability of soil sampling.
in the region. This will be followed up with detailed surface sampling over the anomalies if the regolith is appropriate.

4WD access to the tenement is difficult with the Ware Range preventing approach from the east. Access would be through Suplejack Station, then forging a track north. The most recent visits to the tenement were during the helicopter sampling programme. Brief reconnaissance in the northwest of the tenement raised doubts concerning the units interpreted as Nongra Creek Beds (Atn) by Blake et al. (1975; pers. comm. Maryanne Muir, 2001). Ideally, extended field reconnaissance should be carried out, as a precursor to, or with, an exploratory posthole programme.

The local geology is interpreted to consist of Proterozoic folded felsic (?dacite), sedimentary and magnetic (?basalt) packages, possibly part of the Nongra Ck Beds (Atn). The southwestern portion may be a granite. A northwest-trending structure cross-cutting several magnetic units is apparent on the aeromagnetics. Gardiner Sandstone (Pdg), designated as an exclusion zone by the Traditional Owners, outcrops prominently in the area.

3.2 EL 7803 (Tanami Lakes)

Exploration was focused on the northern half of EL7803 due to its prospective stratigraphy, proximity to the mining leases and accessibility. 177 postholes were drilled in several programmes for a total of 3,640m drill metres (Hole numbers EL7803-1 to EL7803-4, TLPH001 to TLPH100, TLPH107 to 120, TLPH 124-153, TLPH158 to 186). The geology of the region comprises a folded sequence of mafic volcanic, volcaniclastic and siltstone units of the MacFarlane Peak Group. A deeply weathered, weakly magnetic, small quartz-biotite granite pluton of the Coomarie Suite, intrudes the mafic-dominated sequence in the west of the tenement. The southern portions of the Coomarie Dome extend into the north of the EL. Gardener Sandstone outcrops in the eastern and central portions of the tenement.

An initial walkabout posthole programme of 19 holes was completed in July 2000 to test the stratigraphy and determine the depth of cover. The Flores paleochannel channel winds through the northwest of the tenement, and has a transported profile of clay, sand, silcrete and gravel to 85m deep. Away from the channel and north of the Tanami Track, the cover varied between depths of 10 to 30m and consisted of fine to coarse sands and minor clay and gravel.

South of the Tanami Track, depth to residual became less with distance from the channel. Subsequent posthole programmes were carried out over this area as it was interpreted to have the most favorable geological and structural conditions for mineralisation. Drilling near the margins of the palaeochannel was most effective with aircore, as a shallow water table and wet, waxy, transported clays made for difficult RAB drilling conditions.

Several unconformity (sample 2) and residual (sample 3) anomalies require testing with infill posthole drilling with the aim of determining a suitable orientation for follow-up angle aircore drilling.
3.3   EL 7837

Exploration on EL7837 between October 1999 and October 2000 was limited to interpretive regolith studies using the CRC LEME data.

3.4   EL 8479

Exploration on EL8479 between October 1999 and October 2000 was limited to interpretive work using using the CRC LEME regolith data.

4.0 EXPENDITURE ON EXPLORATION LICENCES 13/10/1999 TO 12/10/2000

Table 2 summarises the work programme for the third licence year and the associated costs.

**TABLE 2   Expenditure Summary for Exploration Licences**

<table>
<thead>
<tr>
<th></th>
<th>EL 7799</th>
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<th>EL 8479</th>
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<td>17 660</td>
<td>49 463</td>
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<td><strong>TOTAL</strong></td>
<td>$ 18 890</td>
<td>$ 85 903</td>
<td>$ 4 410</td>
<td>$ 12 260</td>
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5.0 PROPOSED WORK PROGRAMME

5.1 Proposed Work Programme

Exploration efforts will focus on EL 7803 with follow-up posthole within the existing defined anomalous areas to further delineate targets for angle RAB and aircore fences. A regional walkabout posthole programme may be carried out in the southern region of EL 7803 to determine the geology and depth of cover.

Exploration on EL 7799, 7837 and 8479 will remain in the “grass-roots” phase. EL 7799 is an area of prospective stratigraphy and structure that requires validation of the surface anomalies through field reconnaissance and exploratory postholes. EL 8479 and 7837 remain part of the “Deep Cover” programme targeting mineralisation in areas with
extensive transported cover. Surface sampling failed to elicit an anomalous response, so exploratory posthole drilling will be considered to test depth of cover and basement geology.

5.2 Proposed Expenditure

The proposed programme and expenditure commitment for the fourth licenced year is summarised in Table 3.

TABLE 3 Proposed Expenditure 2000-2001

<table>
<thead>
<tr>
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<td>Field Costs</td>
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<td><strong>TOTAL</strong></td>
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6.0 REFERENCES


